

# *Project Baseline Summary Report*

Data Source: **EM CDB**  
Operations/Field Office: **Nevada**  
Site Summary Level: **Nevada Test Site**  
Project **NV360 / Mixed Low-Level Waste**

Report Number: **GEN-01b**  
Print Date: **3/9/2000**  
HQ ID: **0444**

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## **General Project Information**

### **Project Description Narratives**

#### **Purpose, Scope, and Technical Approach:**

The purpose of the MLLW Project is to review and select the preferred and alternative treatment options for MLLW covered under the Nevada Test Site (NTS) Site Treatment Plan (STP) and Mutual Consent Agreement (MCA), to meet applicable Waste Acceptable Criteria (WAC) required by the receiving treatment and disposal site. The project also manages NTS MLLW at regulated waste treatment, storage, and disposal facilities to protect against potential risks to human health and the environment. Treatment of existing MLLW is currently accomplished offsite as negotiated by DOE and the state of Nevada in the Federal Facilities Compliance Act Consent Order. According to terms of the agreement, MLLW is stored temporarily, or within the timeframe negotiated with the state of Nevada pending treatment and disposal.

Project activities include identification, characterization, treatment, storage, and/or onsite disposal for MLLW at the NTS, as well as for newly generated waste from DOE/NV Environmental Restoration activities within the state of Nevada. Possible impacts of decisions resulting from the Waste Management PEIS ROD are not included in the project baseline.

Included are management of waste in storage in accordance with RCRA requirements, including weekly inspections, radiological surveys, label and marking checks, and maintenance of an inventory database. Also included are development of treatment and disposal plans, assuring that waste meets Waste Acceptance Criteria, repackaging of waste if necessary, preparing necessary documentation for the various phases of project activities, and shipment of the waste to the identified disposal site in accordance with RCRA and Department of Transportation requirements.

Additionally, review, revision as applicable, and maintenance of the NTS RCRA Part B Permit are included.

#### **Project Status in FY 2006:**

MLLW waste currently in storage at the NTS will be disposed by FY 2000. The MLLW Project will continue to provide MLLW characterization, certification, treatment, and transportation capabilities for MLLW generated by the DOE/NV Environmental Restoration program through FY2010. The RCRA Permit will be reviewed, revised, and maintained.

#### **Post-2006 Project Scope:**

The MLLW Project will continue to provide MLLW characterization, certification, treatment, and transportation capabilities for MLLW generated by the DOE/NV Environmental Restoration program through FY 2010. The RCRA Permit will be reviewed, revised, and maintained.

#### **Project End State**

Legacy MLLW will be dispositioned by the end of FY2000, and MLLW management capability for DOE/NV environmental restoration waste will be completed by the end of FY 2010. The long-term surveillance and maintenance liability of disposal will be covered under the LLW project. Responsibility for the NTS RCRA Part B Permit will transfer to Program Integration in FY 2011.

#### **Cost Baseline Comments:**

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## **Project Description Narratives**

Historically, accumulated data from the past 10 years have been used to project current-year dollars without contingency. The cost estimates, where applicable, are based on Activity-Based Cost Estimating. The Nevada Waste Management Division baseline is based on bottoms-up, activity based estimates of discrete work elements. Cost data input is derived from historical facility and operations data; bottoms-up estimates; available databases, engineering and professional judgement, and bids from external vendors.

Projected costs are escalated per guidance, at 2.7% in FY2000 only, and 2.1% for FY2001 and beyond (2.3% for construction). Contingency is identified in the cost estimates where appropriate, and is applied in a manner which is consistent with the Nevada Operations Office Cost Estimating Guide. Engineering studies, continuous process improvement efforts, value engineering studies, and alternative analysis are used to identify areas where improvements or operational efficiencies may be implemented

### **Safety & Health Hazards:**

The initial analytical effort for all facilities is a hazard analysis that systematically identifies facility hazards and accident potentials through hazard identification and hazard evaluation. The focus of the hazard analysis is on thoroughness and requires evaluation of the complete spectrum of hazards and accidents. This largely qualitative effort forms the basis for the entire safety analysis effort, including specifically addressing defense in depth and protection of workers and the environment.

Workers may encounter the normal occupational safety hazards related to Treatment, Storage, and Disposal facilities. Workers who will be involved in performing the tasks are involved in the hazard assessment process. The hazard analysis criteria for WM programs at DOE/NV is documented in WBS 2.12, "Hazard assessment" in Volume 3 of the DOE/NV Necessary and Sufficient (N&S) process - final report dated September 30, 1996.

The formally established safety and health controls that have been tailored to address hazards associated with performing site activities include Federal and state regulations, DOE orders and guidance documents, facility operations hazard assessments and standard operating procedures, and contractor company-specific policies and procedures. In addition, field instructions and health and safety plans are developed and implemented to address the hazards associated with remediation and waste handling/disposal activities. The applicable Federal regulations include 29 CFR 1910 and 1926 (OSHA), 40 CFR series [Environment (EPA)], 49 CFR [Transportation (DOT)], and 10 CFR [Energy (NRC and DOE)]. The overall policies, procedures, and plans are written to comply with DOE Policies including P 411.1, "Safety Management Functions, Responsibilities, and Authorities Policy," P 450.4, "Safety Management System Policy," and P 450.6 "Environment, Safety and Health;" DOE Orders including O 420.1, "Facility Safety,"

O 440.1, "Worker Protection Management for DOE Federal and Contractor Employees," O 5400.1, "General Environmental Protection Program," O 3790.1B, "Federal Employee Occupational Safety and Health Program," O 5480.4, "Environmental Protection, Safety, and Health Protection Standards," O 5480.23, "Nuclear Safety Analysis Reports;" and O 5820.2A and successor O 435.1, "Radioactive Waste Management," DOE/EH-0227P, DOE-STD-1098-96, DOE/EH/EM Management Perspectives on Worker Protection During DOE Hazardous Waste Activities, and DOE/EH/EM Working Safely During DOE Hazardous Waste Activities. DOE/NV Waste Management guidance is provided by the Nevada Assistant Manager for Environmental Management Health and Safety Plan (HASP) and by project specific Health and Safety Plans that are developed for specific waste activities or facilities and associated activities and hazards. Additional radiological protection program guidance and requirements are outlined in the DOE/NV Nevada Test Site-Yucca Mountain Project Radiological Control Manual and the Nevada Test Site Radiation Protection Program.

### **Safety & Health Work Performance:**

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## Project Description Narratives

WM work was included in DOE/NV Necessary and Sufficient closure process and is covered by the existing M&O contractor Integrated Safety Management System (ISMS) for all work performed. (Graded approach with balanced priorities) Inherent in this activity is confirming readiness to perform the work. The contractor confirms by performing self-assessments, which assures that all necessary controls are in place and that ES&H training is to the appropriate level of competence, for workers to perform work.,WM work was included in DOE/NV Necessary and Sufficient closure process and is covered by the existing M&O contractor Integrated Safety Management System (ISMS) for all work performed. (Graded approach with balanced priorities) Inherent in this activity is confirming readiness to perform the work. The contractor confirms by performing self-assessments, which assures that all necessary controls are in place and that ES&H training is to the appropriate level of competence, for workers to perform work.

### PBS Comments:

The STP and MCA for MLLW will be managed within this project. Any MLLW identified will be managed in accordance with RCRA under the conditions of the MCA, with funding provided by the cognizant program. The capability to dispose of MLLW generated by on-site and NTS related generators will be maintained up to FY2007. Closure of the MLLW disposal facilities will be covered under the LLW project. Development and maintenance of the RCRA permits for the MLLW facilities is covered by the Program Management project.

### Baseline Validation Narrative:

The Nevada Operations Office Waste Management Division baseline, which contains the individual Project Baseline Summary data sheet baseline information for the DOE/NV Waste Management program, was formally reviewed in Fisd Assistant Manager for Environmental Management Health and Safety Plan (HASp) and by project specific Health and Safety Plans that are developed for specific waste activities or facilities and associated activities and hazards. Additional radiological protection program guidance and requirements are outlined in the DOE/NV Nevada Test Site-Yucca Mountain Project Radiological Control Manual and the Nevada Test Site Radiation Protection Program.

## General PBS Information

**Project Validated?** Yes **Date Validated:** 4/3/1998  
**Has Headquarters reviewed and approved project?** No  
**Date Project was Added:** 12/1/1997  
**Baseline Submission Date:** 7/8/1999  
**FEDPLAN Project?** Yes

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	N	Y	N	N	N	Y	Y	N

## Project Identification Information

**DOE Project Manager:** Angela P. Colarusso,Angela P. Colarusso,Angela P. Colarusso,Ange

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## General PBS Information

DOE Project Manager Phone Number: 702-295-1218,7  
DOE Project Manager Fax Number: 702-295-1153  
DOE Project Manager e-mail address: colarusso@nv.doe.gov  
Is this a High Visibility Project (Y/N):

## Planning Section

### Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	
PBS Baseline (current year dollars)	8,572	2,012	10,584	2,519	738	719	678	412	815	663	664	667	707	696	710	
PBS Baseline (constant 1999 dollars)	8,160	1,657	9,817	2,519	738	719	678	412	794	632	620	610	633	611	610	
PBS EM Baseline (current year dollars)	8,572	2,012	10,584	2,519	738	719	678	412	815	663	664	667	707	696	710	
PBS EM Baseline (constant 1999 dollars)	8,160	1,657	9,817	2,519	738	719	678	412	794	632	620	610	633	611	610	
	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS Baseline (current year dollars)	725	740	271	276	0	0	0	0	0	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	610	610	219	218	0	0	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	725	740	271	276	0	0	0	0	0	0	0	0	0	0	0	0

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	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS EM Baseline (constant 1999 dollars)	610	610	219	218	0	0	0	0	0	0	0	0	0	0	0	0

## Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	2.70%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%
2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

## Project Reconciliation

### Project Completion Date Changes:

Previously Projected End Date of Project: 9/1/2007

Current Projected End Date of Project: 9/30/2010

Explanation of Project Completion Date Difference (if applicable):

Continued through FY2010 to reflect ER needs.

### Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	6,053	Actual 1997 Cost:	738	Actual 1998 Cost:	678
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	4,637	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			125
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	4,762				

### Project Cost Changes

Cost Adjustments    Reconciliation Narratives

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## Project Reconciliation

<b>Cost Change Due to Scope Deletions (-):</b>	1,227	Scope on STP waste transferred to Program Integration.
<b>Cost Reductions Due to Efficiencies (-):</b>		
<b>Cost Associated with New Scope (+):</b>	3,044	Movement of RCRA Part B Permit from Prog. Intgrtn; schedule increase to accomodate ER mixed waste.
<b>Cost Growth Associated with Scope Previously Reported (+):</b>		
<b>Cost Reductions Due to Science &amp; Technology Efficiencies (-):</b>		
<b>Subtotal:</b>	6,579	
<b>Additional Amount to Reconcile (+):</b>	0	
<b>Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):</b>	<b>6,579</b>	

## Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Dispose Pb Contaminated Soil, BFV, Bulk Pb Trash Treated at A5	C301A45		4/30/1999	4/30/1999	4/30/1999		Y				
Issue RFP for Treatment of Area 12 Liquid Waste	C301A56		4/30/1999	4/30/1999	4/30/1999		Y				
Notify Of Approval, Ship Sched. for PCB or Discuss with NDEP	C301A30		2/26/1999	2/26/1999	2/26/1999		Y				
Prepare Treatment & Disposal Plan for EMAD 114	C301A10		1/1/1999	1/1/1999	1/1/1999	11/16/1998	Y				
Receive Pb Contam. Soil, Bulk Pb Trash Back from Treatment	C301A25		1/29/1999	1/29/1999	1/29/1999	12/17/1998	Y				
Ship Area 12 Liquid Sample to WCS	C301A55		11/30/1998	11/30/1998	11/30/1998	11/12/1998	Y				
Ship Area 12 Liquid Waste Back to NTS for Disposal	C301A57		6/30/1999	6/30/1999	6/30/1999		Y				
Submit Draft STP Annual Update	C301A15		1/15/1999	1/15/1999	1/15/1999	12/11/1998	Y				
Submit Final Annual STP Update	C301A40		4/30/1999	4/30/1999	4/30/1999		Y				
Submit Interim Status Report on PCB PPE/Trash	C301A01		11/30/1998	11/30/1998	11/30/1998	10/27/1998	Y				
Submit Notif. of Intent to Treat TTF Solvent or Hold in	C301A35		4/16/1999	4/16/1999	4/16/1999	11/5/1998	Y				

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## Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Abeyance											
Submit Process Schedule for Area 12 Liquid Waste	C301A58		6/30/1999	6/30/1999	6/30/1999		Y				
Submit Status Repot for Treatment of TTF Solvent MW Stream	C301A05		11/30/1998	11/30/1998	11/30/1998	10/14/1998	Y				
Update draft of RCRA Part B Permit Renewal			7/31/1999								
Update draft of RCRA Part B Permit Renewal			7/31/2004								
Update draft of RCRA Part B Permit Renewal			7/31/2009								
Update draft of RCRA part B Permit Renewal			7/31/2014								
DOE Sumit Final RCRA Part B Permit Renewal to State of Nevada			11/15/1999							Y	
Submit Final RCRA Part B Permit Renewal to State of Nevada			11/15/2004							Y	
DOE Sumit Final RCRA Part B Permit Renewal to State of Nevada			11/15/2009							Y	
DOE Submit Final RCRA Part B Permit Renewal to State of Nevada			11/15/2014							Y	
Project Start			6/30/1997								
Project End			9/30/2010								

## Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Dispose Pb Contaminated Soil, BFV, Bulk Pb Trash Treated at A5	C301A45										
Issue RFP for Treatment of Area 12 Liquid Waste	C301A56										

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## Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Notify Of Approval, Ship Sched. for PCB or Discuss with NDEP	C301A30										
Prepare Treatment & Disposal Plan for EMAD 114	C301A10										
Receive Pb Contam. Soil, Bulk Pb Trash Back from Treatment	C301A25										
Ship Area 12 Liquid Sample to WCS	C301A55										
Ship Area 12 Liquid Waste Back to NTS for Disposal	C301A57										
Submit Draft STP Annual Update	C301A15										
Submit Final Annual STP Update	C301A40										
Submit Interim Status Report on PCB PPE/Trash	C301A01										
Submit Notif. of Intent to Treat TTF Solvent or Hold in Abeyance	C301A35										
Submit Process Schedule for Area 12 Liquid Waste	C301A58										
Submit Status Repot for Treatment of TTF Solvent MW Stream	C301A05										
Update draft of RCRA Part B Permit Renewal										Y	
Update draft of RCRA Part B Permit Renewal											
Update draft of RCRA Part B Permit Renewal											
Update draft of RCRA part B Permit Renewal										Y	

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## Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description			
DOE Submit Final RCRA Part B Permit Renewal to State of Nevada														
Submit Final RCRA Part B Permit Renewal to State of Nevada														
DOE Submit Final RCRA Part B Permit Renewal to State of Nevada														
DOE Submit Final RCRA Part B Permit Renewal to State of Nevada										Y				
Project Start				Y										
Project End					Y	Y								

## Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
MLLW														
Treatment	M3	24.71	0.00	24.71	0.00		0.00		24.71					
MLLW														
Storage	M3							12.70	0.00	0.00	0.00	0.00	0.00	0.00
MLLW														
On-Site Disp.	M3	230.30	0.00	230.30	0.00		0.00	230.00	0.30					
MLLW														
Ship to DOE Disp.	M3	0.00	0.00	0.00	0.00		0.00							
Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035	Planned 2036 - 2040

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Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035
MLLW													
Treatment	M3												
MLLW													
Storage	M3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLLW													
On-Site Disp.	M3												
MLLW													
Ship to DOE Disp.	M3												
Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total			
MLLW													
Treatment	M3									26.30			
MLLW													
Storage	M3	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
MLLW													
On-Site Disp.	M3									263.50			
MLLW													
Ship to DOE Disp.	M3									0.00			

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